

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matters of)	
)	
Wireless Emergency Alerts)	PS Docket 15-91
)	
Amendments to Part 11 of the Commission's Rules)	PS Docket 15-94
Regarding the Emergency Alert System)	
)	

**COMMENTS OF THE NEW YORK CITY EMERGENCY MANAGEMENT DEPARTMENT ON THE NEED FOR
MULTIMEDIA CAPABILITY IN WIRELESS EMERGENCY ALERTS**

Submitted Electronically May 29, 2018

INTRODUCTION

1. The City of New York's Emergency Management Department ("NYCEM" or "the Department" or "the agency") is pleased to submit comments to the above captioned matters in response to the Federal Communications Commission's Public Safety and Homeland Security Bureau's ("FCC" or "the Commission") request to refresh the record on the need for multimedia capability in Wireless Emergency Alerts ("WEA").¹
2. NYCEM, New York City agency partners, representatives from emergency management and public safety agencies, elected officials, and associated national organizations have actively advocated for needed improvements to the nation's WEA System for the past several years as part of the Commission's Notice of Proposed Rulemaking ("Notice" or "NPRM") and Further Notice of Proposed Rulemaking ("Further Notice" or "FNPRM") proceedings in the above-captioned dockets, as well as in many *Ex Parte* conversations with Commission staff.² NYCEM sincerely appreciates the actions taken by the Commission in its 2016 Report and Order and 2018 Second Report and Order. The rules adopted in these orders, many of which do not go into effect until mid-to-late 2019, will surely

¹ See 83 Fed. Reg. 18257 (April 26, 2018)

² See, for example, NYCEM Comments to Notice of Proposed Rulemaking dated December 29, 2015; NYCEM Comments to Further Notice of Proposed Rulemaking dated December 8, 2016; Joint letter from Big City Emergency Managers, National Emergency Management Association, International Association of Emergency Managers, National Emergency Number Association, and the United States Conference of Mayors dated January 5, 2018; Letter from Mayor Bill de Blasio dated September 22, 2016; Letters from New York City Police Commissioner James P. O'Neil dated September 21, 2016 and January 3, 2018; Letter from New York City Fire Commissioner Daniel A. Nigro dated September 22, 2016; Comments of the Association of Public-Safety Communication (APCO) filed December 8, 2016.

strengthen our City's and the nation's ability to provide improved alerts and warnings to our residents and visitors.

3. Despite the recent enhancements, significant gaps remain between what today's technology can offer and what the WEA System supports. Chief among these gaps is the inability to incorporate multimedia (e.g., images, maps, infographics, etc.) into WEA messages. The need for this capability within the WEA System has been thoroughly documented in the public record beginning with proceedings of the Communications Security, Reliability, and Interoperability Council ("CSRIC") III in 2013, continuing with CSRIC IV, as well as by a multitude of other public safety and emergency management commenters.³
4. NYCEM reiterates that the inclusion of multimedia capability in WEA messages is a critical public safety priority. As previously stated by New York City Police Commissioner James P. O'Neil:

"...the law enforcement community can no longer afford to depend on an emergency wireless response system that is lagging far behind what technology can offer. In this age of instant access to visual information via social media applications, we need to enhance our country's ability to rapidly, efficiently, and securely deliver comprehensive emergency information, including images, to the public. Pictures provide instant recognition and speak a universal language. More importantly, they enable rapid response from every potential witness who could save countless lives through fast action." ⁴

MULTIMEDIA IS UNIVERSAL IN TODAY'S MOBILE-CONNECTED ENVIRONMENT, EXCEPT FOR EMERGENCY ALERTING.

5. NYCEM continues to stress that the sought capability is not an emerging or unproven technology in the consumer space. On the contrary, in 2014, more than 40 percent of YouTube's traffic was via mobile users.⁵ The industry's own research has found that Americans "...used a record 13.72 trillion megabytes (MBs) of mobile data in 2016, an increase of over 4 trillion MBs over 2015 and 35 times the volume of traffic in 2010."⁶ While mobile data consumption has increased dramatically, mobile download speeds have also increased by 61 percent since 2014, supporting the mobile network's capacity to handle increased data traffic.⁷ Additionally, there were 277.9 billion multimedia messages

³ See CSRIC III Working Group 2: Next Generation Alerting Final Report at pages 30-31.

⁴ See Letter from New York City Police Commissioner James P. O'Neil to Chairman Pai dated January 3, 2018.

⁵ See *The Mobile Video Revolution: How Netflix, Vevo, and YouTube have Thrived on Smartphones and Tablets*. <http://www.businessinsider.com/mobile-video-statistics-and-growth-2013-12>. Accessed May 15, 2018.

⁶ See CTIA's *Annual Wireless Industry Survey* and accompanying press release. <https://www.ctia.org/news/americans-wireless-data-usage-continues-to-skyrocket>. Accessed May 15, 2018.

⁷ See CTIA's *Industry Data*. <https://www.ctia.org/the-wireless-industry/infographics-library>. Accessed May 18, 2018.

(MMS) sent in 2016, a 27.2 percent increase over 2015.⁸ The same survey highlights a record 50.8 percent of United States households are “wireless-only,” increasing to two-thirds for millennials.⁹ These households are outside the reach of traditional “reverse 911” systems, dramatically increasing the importance of WEA. Moreover, researchers forecast smartphones to account for the most data traffic (overtaking broadband) as soon as 2021.¹⁰ Given these statistics, NYCEM contends that today’s wireless devices and networks are clearly able to support the inclusion of multimedia in WEA messages.

POTENTIAL USE CASES FOR MULTIMEDIA ALERTS (adapted from previous filings)¹¹

6. *Displaying Image(s) of a Wanted Suspect* - On September 17, 2016, a bomb went off in New York City’s Chelsea neighborhood. Early in the morning on September 19, 2016, our law enforcement partners had a suspect name, age, description, and photograph and asked for our Department’s help in eliciting the public’s assistance to locate the suspect. NYCEM transmitted a WEA message but, due to the system’s limitations, had to direct people to “see media for pic” instead of being able to embed a photograph of the system. Following that WEA message, NYCEM contracted a research firm to conduct a poll of New Yorkers’ experience and behavior with the WEA message. While 100 percent of individuals polled received the WEA message, only 45 percent of recipients sought out the suspect’s photo from another source.¹² If the suspect’s image was embedded in the WEA message, 100 percent of recipients would have seen the image.
7. *Emergency Protective Infographic* - Following a suspected release of a chemical, biological, radiological, or nuclear agent, the public would likely be directed to remove their clothes, shower, and/or shelter in place. There are more than 200 languages spoken in New York City as well as a sizeable disabilities and access and functional needs population, all of whom would need these instructions relayed in a manner that they could understand. Even with an expanded character count, NYCEM may not be able to adequately describe emergency instructions (even to English speakers). A multimedia alert that includes an infographic that provides such information would be helpful and potentially lifesaving. For example:¹³

⁸ See CTIA’s *Annual Wireless Industry Survey* and accompanying press release (Key Mobile Trends in the United States). <https://www.ctia.org/news/americans-wireless-data-usage-continues-to-skyrocket>. Accessed May 15, 2018.

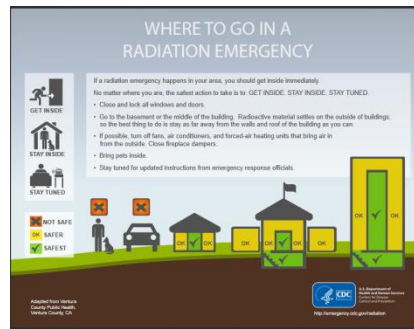
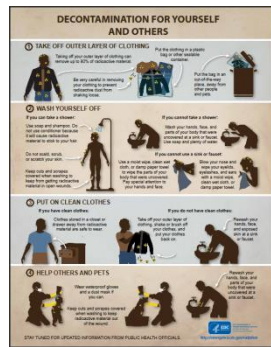
⁹ See CTIA’s *Annual Wireless Industry Survey* and accompanying press release (Key Mobile Trends in the United States). <https://api.ctia.org/docs/default-source/default-document-library/ctia-wireless-snapshot.pdf>. Accessed May 15, 2018.

¹⁰ Global Entertainment and Media Outlook 2017-2021, PwC, Ovum. <https://www.pwc.com/gx/en/industries/tmt/media/outlook/segment-insights/data-consumption.html>. Accessed May 14, 2018.

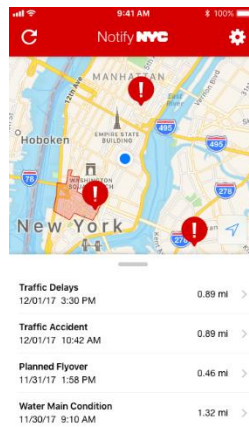
¹¹ See NYCEM Comments to Further Notice of Proposed Rulemaking, December 8, 2016, at 18.

¹² *Survey Findings & Analysis: Emergency Alerts Survey*, Global Strategies Group, September 28, 2016, at page 2. (Note: margin of error +/- 4.9% at 95% confidence level).

¹³ Decontamination for Yourself and Others, https://emergency.cdc.gov/radiation/pdf/infographic_decontamination.pdf and Where to Go in a Radiation



8. *Map of an Exclusion Zone or Frozen Zone* - Following certain incidents, emergency officials may establish exclusion zones or frozen zones where pedestrians and vehicles are not permitted. Communicating the boundaries of these areas through an image and/or map would be clearer than a text description.
9. *Location Relative to Affected Area* – Similar to the above, to reduce risks to public safety, multimedia may allow WEA recipients to visualize their location relative to that of an Exclusion/Frozen Zone or other impacted area(s). For example:



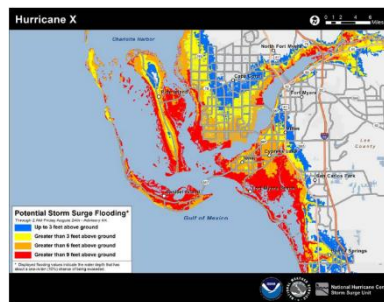
10. *Potential Inundation Maps from the National Weather Service/National Hurricane Center* – Storm surge is the most deadly hazard associated with hurricanes and one of the most challenging hazards to communicate. During Hurricane Katrina, there were at least 1500 deaths associated with storm surge.¹⁴ During Hurricane Sandy, 34.2 percent of deaths were associated with drowning, more than any other cause of death.¹⁵ Recently, the National Hurricane Center began issuing a *Potential Storm*

Emergency, https://emergency.cdc.gov/radiation/pdf/infographic_where_to_go.pdf. Both accessed November 20, 2016.

¹⁴ See National Hurricane Center *Storm Surge Overview* <https://www.nhc.noaa.gov/surge/>. Accessed May 18, 2018.

¹⁵ See Centers for Disease Control and Prevention, Morbidity and Mortality Weekly Report. *Deaths Associated with Hurricane Sandy October-November 2012*.

Surge Flooding Map to help emergency managers and members of the general public better understand the location and severity of the storm surge threat. Being able to transmit this graphical product via WEA will save lives.



MULTIMEDIA CONTENT STILL BENEFICIAL, EVEN IF TRANSMISSION IS SLIGHTLY DELAYED

11. The Commission’s FNPRM asked if there were situations where the public would benefit from WEA-transmitted multimedia content even if it took slightly longer (up to a minute) for delivery.¹⁶ Consistent with our previous filings, NYCEM appreciates the concern expressed by the Commercial Mobile Service Providers (“CMSP” or “CMSPs”) related to network congestion and the ability to transmit multimedia via WEA. As such, NYCEM reaffirms its position that the public would benefit from WEA-transmitted multimedia comment even if such content was delivered with a slight delay following the text portion of the WEA message. In many cases, even a delay of several minutes from transmission to delivery of WEA-transmitted multimedia comment would still allow for markedly improved alert and warning messages.

5G TECHNOLOGY EXPECTED TO BE TRANSFORMATIVE & MUST ALSO IMPROVE LOCAL GOVERNMENT’S ABILITY TO SAVE LIVES

12. Tim Baxter, the President and CEO of Samsung Electronics North America, recently said, “[w]e are absolutely convinced that 5G is the next revolution.”¹⁷ The wireless industry is already touting the many potential advancements attributable to 5G.¹⁸ In NYCEM’s filing to the FNRPM, it applauded the Commission for “...opening a dialogue on the future of WEA in the context of forthcoming 5G networks.”¹⁹ Given the highly advanced capabilities of 5G networks, NYCEM renews its comments on this subject and believes that the Commission should adopt rules supporting more advanced alerting technologies including but not limited to²⁰:

¹⁶ WEA Further Notice of Proposed Rulemaking, September 29, 2016, at 127.

¹⁷ See *Not just speed: 7 incredible things you can do with 5G*. <https://www.cnet.com/news/5g-not-just-speed-fifth-generation-wireless-tech-lets-you-do-vr-self-driving-cars-drones-remote/>. Accessed May 18, 2018.

¹⁸ See, for example, CTIA position *Competition*. <https://www.ctia.org/positions/competition>. Accessed May 18, 2018 and CTIA’s *The Race to 5G*. <https://www.ctia.org/the-wireless-industry/the-race-to-5g>. Accessed May 18, 2018.

¹⁹ See NYCEM Comments to the Further Notice of Proposed Rulemaking at Paragraph 30.

²⁰ See NYCEM Comments to the Further Notice of Proposed Rulemaking at Paragraph 30.

- a. Expanding character counts beyond 360. As noted in the *START Report*, longer messages can improve the public's response;²¹
 - b. Making Many-to-One feedback a reality;
 - c. Supporting video in order to: (i) support American Sign Language; (ii) allow public officials to directly communicate emergency information to consumer devices; and (iii) allow emergency instructional videos to be broadcast;
 - d. Supporting larger image sizes and/or multiple images; and
 - e. Expanding the number of languages supported.
13. NYCEM strongly asserts that, as demonstrated above, today's 4G/LTE networks have adequate capacity to support multimedia WEA messages and there is a critical public safety need for the system to do so in the immediate term. In addition to adopting rules that require multimedia alerting on existing wireless networks, the Commission should adopt rules that require multimedia support in WEA messages on 5G and future networks. Given the anticipated investment (\$275 billion)²² and capability of 5G technologies, there is no reasonable basis to do otherwise.

CONCLUSION

14. The threats and hazards facing New York City and the nation continue to expand. From terrorism, to active shooter incidents, to more powerful hurricanes, to wildfires, local government emergency management and public safety officials stand on the front line of protecting lives and saving property. A critical element of any response and a primary responsibility of local government is to issue alerts and warnings effectively. Given the sheer penetration of mobile phones and smart devices, WEA is a keystone element of this mission. However, its capability is trailing far behind what is needed and what today's technology can support. With 89 percent of people always having their smartphone within arm's reach, WEA is a natural and appropriate system to invest in and enhance in order to keep the public informed, save lives, and safeguard property.²³ NYCEM is eager to continue engaging with the Commission, the wireless industry, and other stakeholders to bring WEA into the 21st century.

²¹ *START Report* at 30. At the same time, however, the *START Report* finds that "[t]here is nothing inherently better about 1,380-character messages." *Id.* at 35. Rather, "people need to be provided with sufficiently detailed information about exactly what steps to take to protect themselves, and the number of characters needed to accomplish this likely varies across hazards." *Id.* at 31.

²² See CTIA's *The Race to 5G*. <https://www.ctia.org/the-wireless-industry/the-race-to-5g>. Accessed May 18, 2018.

²³ See CTIA's *Industry Data*. <https://www.ctia.org/the-wireless-industry/infographics-library>. Accessed May 23, 2018.